

Amendment C to SN 09/879,709

Page 2 of 17

In the specification:

Amend the paragraph beginning on line 3 of page 6 to the following:

Between the rim 14 and the tire 12 are individual balls 18. The balls have a diameter and extend radially to span ~~that spans~~ the space between the rim and the tire, so that a single layer of balls substantially fills the empty space between the rim 14 and the tire 12. The number, size, and shape of the balls 18 are selected depending upon the dimensions of the tire 12 and rim 14. While this view shows the ball 18 as having a substantially spherical shape, that is due to the fact that this particular tire casing 12 and rim 14 together form a void space with a substantially circular cross-section. If the rim 14 were substantially wider than the height of the tire casing, or if the height of the tire casing were substantially taller than the width of the rim, then the balls 18 preferably would have a more elliptical shape. Also, a more elliptical shape may be desirable in order to fit the desired number of balls into the tire, as will be explained later. The balls 18 preferably are made of a material that does not stretch significantly, so the surface area of the ball does not increase appreciably as the internal pressure of the gas inside the ball increases.

Amendment C to SN 09/879,709

Page 3 of 17

Amend the paragraph beginning on line 15 of page 12 as follows:

An alternative embodiment is shown in Figure 5. In that embodiment, the assembly is the same as in the first embodiment, except that an inner tube 60 has been inserted between the balls 18 and the rim 14. The balls 18 still have a diameter and extend radially to span that spans the space between the tire and the rim, so that there is only a single layer of balls 18. In this embodiment, the valve 20 goes through the rim 14 and into the interior of the tube 60. The inner tube 60 is a standard inner tube, having a toroidal shape. This results in a hybrid-type of tire assembly. If the pressure inside the tube 60 is low, the assembly functions in the same manner as the first embodiment, as if the tube were not present. As the pressure of the tube 60 is increased, the tire assembly acquires a more rigid effect. The tube 60 allows external adjustment for changes in load, terrain, or altitude.

Amendment C to SN 09/879,709

Page 4 of 17

Amend the paragraph beginning on line 3 of page 13 to the following:

While the preferred embodiment of the invention, as shown in Figure 3, has all the balls 18 inflated to approximately the same pressure, an alternative would be to inflate the balls 18 to different pressures, for example, alternating from a higher pressure in one ball to a lower pressure in the next adjacent ball, back to a higher pressure in the next ball, and so forth, in a repeating pattern. This would have a similar effect to providing knobs on the tire 12, in that the lower pressure balls would compress more under load than the higher pressure balls, causing the portions of the tire 12 supported by the higher pressure balls to dig into the support surface, giving the resulting assembly very good traction properties.

Amendment C to SN 09/879,709

Page 5 of 17

Amend the paragraph that was inserted on page 14, before the paragraph that begins on line 4, to the following:

Looking at Figure 17, it can be seen that each of the individual balls 18 is independent of the tire and rim and is free to shift in the circumferential direction relative to the tire and rim, so that, if one ball is punctured and deflates, the remaining balls are free to shift circumferentially and redistribute themselves to substantially fill the space that was created by the deflated ball, with the result being that the vehicle continues to be well-supported, and the tire does not go flat. Even if a rim lock 22 is used, as shown in Figures 3 and 5, the individual balls 18 are still free to shift circumferentially relative to the hub and tire to redistribute themselves in order to provide continued support in the event that a ball 18 goes flat. While the foregoing embodiments have shown other elements located inside the hollow space, in addition to the balls 18, such as a rim lock 22 and air that is outside of the balls 18, the balls 18 are the most rigid elements that extend radially to span the hollow space. The rim lock 22, which is more rigid than the balls 18, is radially recessed, lying adjacent to the rim, so it does not extend radially to span the space and does not interfere with the quality of the ride provided by the balls 18. The air that is outside of the balls 18 and inside the hollow space does extend radially to span the hollow space, but it is less rigid than the balls 18.